

PROTECTOR28

SECURITY AND HOME AUTOMATION SYSTEM



INTRODUCTION

Congratulations! You purchased a Marmitek Security System. Marmitek Security Systems are quality products and are manufactured with high precision.

The Marmitek Security System protects yourself and your home against intruders. On top of that your Marmitek Security System can control lights and appliances throughout your house (using the existing mains wires!). In that way your Marmitek Security System can create a “lived-in look” when you are away. Optional plug-in modules, wall switches or DIN-Rail modules (at the distribution panel) allow switching of appliances or dimming of lights. These modules can be programmed to be part of the alarm signalling.

Up to 16 wireless (radio) sensors can be installed onto the supplied Security Console SC2800. This base station can be operated by up to 8 wireless (radio) remote controllers. On top of that you can operate your Marmitek Security System via the keyboard of the Security Console SC2800.

When an alarm situation occurs, the built-in telephone voice dialler of the Security Console SC2800 will dial up to 4 pre-programmed telephone numbers and play your pre-recorded alarm message. Anyone picking up the

phone on the other end responds to the alarm message by pressing a single digit on that telephone. This will stop further dialling and allows the person who picked up the phone to “listen-in” to the protected premises by means of the built-in microphone of the Security Console SC2800. Failing sensors will be reported in a similar way by playing a fixed service message.

It is important that you carefully read through all of the chapters of this users’ guide before starting the installation. Also when a third party is installing the system for you, you have to read this manual carefully as it contains important information regarding operation and use of the Marmitek SC2800.

In case of any problems during installation or use of the system, please read first through the troubleshooting chapter in the back of this users’ guide. You also can contact the Martmitek web site (marmitek.com) for additional information. In case you cannot fix the problem with these recommendations, you then have to contact the dealer where you purchased your Marmitek Security System.

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1 GENERAL

- Marmitek systems are designed for use in dry environments.
- Avoid placement of system components in environments with extreme temperatures (normal operation is 0-40°C) or humidity.
- Only the supplied PS500 Mains Adapter can be used to power the SC2800 base station and preferably alkaline batteries should be used for the sensors and remote. Do not use rechargeable batteries!
- Marmitek equipment is CE approved, and has radio transmission approvals for most countries.
- Always carefully follow the instructions in the users' guide.

2 SAFETY PRECAUTIONS

- There is a hazard of electrical shock or injury if the system (the PS500 in particular) is installed in any other way than recommended in this manual. The electrical parameters, especially with respect to the mains voltage listed on the PS500, must be observed at all times.
- Only Marmitek Authorised Service Centres (MASC's) are qualified to repair the system. Unauthorised opening of any parts of the system voids the warranty.
- It is highly dangerous to open the PS500 Mains Adapter as it contains parts carrying 230 V mains voltage. In case of malfunction of the PS500 Mains Adapter, unplug the system and contact your dealer.

3 MARMITEK SYSTEMS

3.1 COMPONENTS

MARMITEK SYSTEMS CONSIST OF THE FOLLOWING PARTS:

1 SC2800 SECURITY CONSOLE (BASE STATION)

2 PS500 MAINS ADAPTOR*

3 MS10 MOTION SENSORS

4 DS10 DOOR/WINDOW SENSORS

5 KR21 KEY FOB REMOTE CONTROL

**6 WALL MOUNTING BRACKET FOR SC2800*
SECURITY CONSOLE**

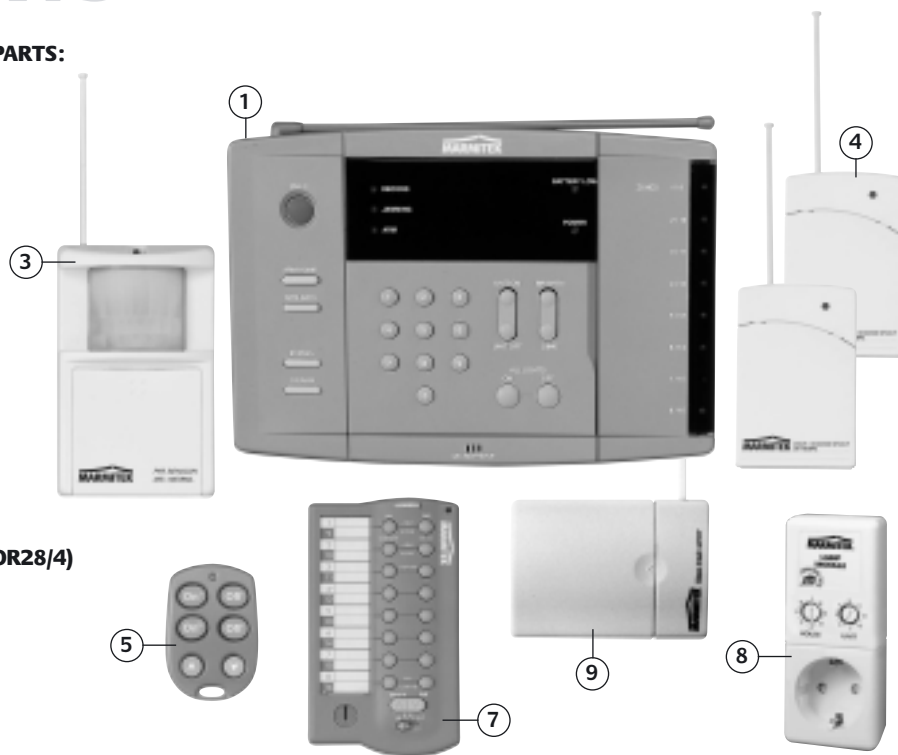
**7 SH624 SYSTEM REMOTE CONTROL
(OPTIONAL FOR PROTECTOR28/4)**

8 LM12 LAMP MODULE (OPTIONAL FOR PROTECTOR28/4)

9 BREAKING GLASS DETECTOR (OPTIONAL)

**10 SET OF ACCESSORIES: BATTERIES,
TELEPHONE CABLES (ANALOG AND ISDN),
WIRED SENSOR CABLE, EAR PHONE AND
INSTALLATION MATERIALS**

*** NOT INCLUDED**



3.2 IMPORTANT FEATURES

- Up to 16 wireless sensors can be installed on the base station
- Alarm and system messages can be sent to up to 4 different phone numbers
- Anti jamming circuit detect interfering radio signals
- The alarm message can be recorded by the user (up to 12 sec.)
- Confirmation of the alarm message by pressing any key on a telephone (DTMF)
- "Listen-in" to the protected premises when an alarm is reported
- Silent alarm function (siren disabled)
- Lifestyle function perfectly simulates presence of residents
- Input for wired sensor (smoke or flood detector)
- Additional sirens and lights can be activated over mains wires (plug and play)
- Automatic activation of lights and appliances when leaving or upon arrival

4 INSTALLATION OF THE COMPONENTS

4.1 SIGNALS AND RANGE

Your security system is using various communication techniques. For a good understanding of these, it is recommended to read through the short explanation given below.

Wireless:

The sensors (DS10 Door/Window Sensor, MS10 Motion Sensor, etc.) and remote controllers, are communicating wirelessly via radio signals with the base station. This has the great advantage that no wires need to be installed between sensors and base station. Moreover, you simply can take the Marmitek system with you in case you're going to move. Built-in transmitters in the sensors and remotes and a receiver in the base station take care of this wireless communication. The ultra high frequencies (UHF) of the transmitters make sure that the signals go through walls and ceilings.

The range (maximum distance between transmitters and base station) depends on local circumstances. I.e. a brick wall will give more attention of the signal than a dry wall. Building materials with metal foil can greatly influence the range. Another reason for reduced range is that other transmitters are in use in the building, operating on the same frequency. Especially wireless (radio) headsets and speakers can influence the range of the sensors and remotes. Cordless phones do not influence the range of the system. Switching power supplies (e.g. used for halogen lamps, CFL lamps, PC's) can influence the range of the system also. The base station is equipped with a system to detect strong interfering signals (refer to chapter 5.7 Set anti jamming detection on/off).

You do not have to worry that these frequencies will influence the alarm functions of the system or initiate an alarm. The signals from the sensors are encrypted in such a way that, after installation, the base station only will recognise these as valid

messages and ignore interfering signal from mobile phones, wireless headsets, other security systems, etc.

Over existing mains wiring:

Controlling lamp modules and other Home Automation modules is done over existing mains wiring. The PS500 Mains Adapter transmits so-called Marmitek X-10 signals coming from the Security Console SC2800 onto the mains wiring, whereby a message containing an address (consisting of a so-called house and unit code) and an instruction (e.g. on or off) are transmitted to e.g. a lamp module.

These signals are transmitted over all mains wiring, regardless of the fuse circuit, as long as these are connected to the same phase. In case you want to transmit the signals over multiple phases, you'll have to install a so-called phase coupler in your installation, preferably at the distribution panel. (more information available through your dealer or at www.marmitek.com). Some extra sirens (PH7208) are addressed in the same way.

Via telephone line:

When an alarm is triggered by one of the sensors or a technical malfunction occurs, an alarm or system message will be transmitted over the phone line connected the Marmitek system, to the persons (friends or family) of which you have programmed the telephone number into the system. For this reason, the base station will be connected to the telephone line with the supplied cable and plug/adaptor (this may be country specific).

In case of a single analog telephone connection: Insert the plug/adaptor/cable combination, coming from the SC2800 base station, into the telephone outlet and insert the plug of your regular phone into this plug/adaptor combination.

During an alarm situation, an eventual telephone call will be disconnected.

In case of a analog PABX with multiple telephones: Connect the SC2800 base station directly to the incoming phone line (i.e. before the PABX). In general you'll need to dial a "0" or a "9" to get an outside line. You need to program this number together with the rest of the phone number you want the base station to dial when an alarm occurs (refer to 5.4).

In case of and ISDN or other digital telephone connection:

The SC2800 can never be connected directly to an ISDN or other digital phone line. You have to connect the SC2800 base station to an analog adapter with the supplied ISDN cable. In case no analog input is available, you have to purchase an adapter (ask you telecom supplier). In general you'll need to dial a "0" or a "9" to get an outside line. You need to program this number together with the rest of the phone number you want the base station to dial when an alarm occurs (refer to 5.4). Please keep in mind that in case of loss of mains power, an ISDN PABX will not allow the SC2800 to dial out. This can only be guaranteed when using an analog telephone line.

4.2

THE SC2800

BASE STATION

1. PANIC

When pressed, this red button initiates an immediate alarm.

2. ARM HOME

Alarm function when being at home. Only door and window sensors (no motion sensors) are activated.

3. ARM AWAY

All sensors are activated.

4. BYPASS

When you want to arm the system and one of the sensors is reporting a problem (e.g. window is still open, battery low, etc.), you can choose to arm the system without activating this particular sensor. As long as you can hear the dual error tone error, you have the option to press the “bypass” button and arm the system again. The zone indicator of that sensor is now flashing rapidly. Once the error condition is corrected (e.g. window closed), the bypass will be automatically removed and the sensor becomes part of the total system again.

5. DISARM

Disarms the system after entering your personal identification code (PIN).

6. SYSTEM INDICATORS

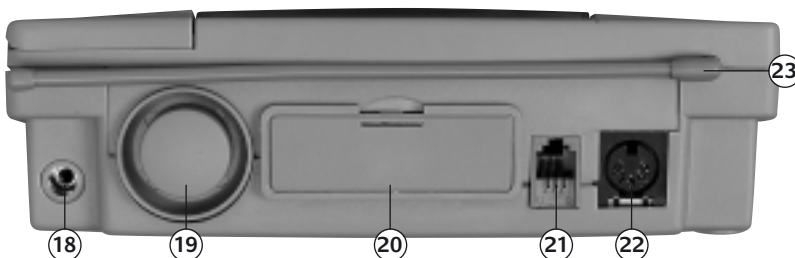
RECORD – Lights when during recording and playing the personal security message.

JAMMING- Indication that a strong interfering signal is detected.

ARM- Lights when the system in armed.

BATTERY LOW- Indication that the back up battery of the base station needs to be replaced.

POWER- Indication for proper operation of the PS500. Lights during normal operation.



7. KEYBOARD

To program and operate the security system.

8. UNIT ON/UNIT OFF

For operating Marmitek X-10 Home Automation Modules (like LM12 Lamp Module). Enter the unit code of the module on the keyboard. Then use this key to switch this module on or off.

9. BRIGHT/DIM

For controlling the brightness of lights connected to a specific lamp module. Enter the unit code of the module on the keyboard and then use this key to brighten or dim the lights.

10. ALL LIGHTS ON/OFF

To switch on all lamp modules in the system or to switch off all modules (lamp and appliance modules), regardless the address.

11. MICROPHONE

Very sensitive microphone for:

- recording a personalised alarm message
- “listen-in” to the protected premises via the telephone line during an alarm situation

12. RUN 1, RUN 2, INSTALL, THERM SWITCH

RUN 1 – For normal alarm operation.

RUN 2 – For normal alarm operation. When in disarmed mode, the base station will give a pleasant sounding tone when a door or window is opened (access control).

INSTALL – Position for installing sensors and for changing system settings.

THERM - For use with Marmitek X-10 Wireless Thermostats. Thermostat functions are described in the manual of the thermostat.

13. ENTER

Used for confirmation of the system settings during installation.

14. TIME OFF

Used to set the Lifestyle mode. When pressing this key at a certain time, the Lifestyle program will be switched off every day at that specific time (refer to 6.9).

15. RECORD

Used for recording and replaying of the alarm message during installation.

16. ZONE 9-16

Used for switching from zone-indicators 1-8 to 9-16.

17. ZONE-INDICATORS

These indicators give the status of each installed zone. Each zone represents one sensor.

18. WIRED SENSOR/EARPHONE JACK

This input jack has two functions:

You can listen to the recorded alarm message during installation.

A wired sensor can be connected to this input (refer to 4.8).

19. SIREN

In case of an alarm this siren gives a piercing warning signal with a 95dB sound pressure level. The siren can be switched off if required (silent alarm). The system allows control of multiple sirens over regular power lines.

N.B.: Volume and tone can be damaging for your hearing when you are too close to the siren when activated.

20. BATTERY COMPARTMENT

This compartment holds the 9 V back-up battery. This battery keeps the system fully operation in case of mains power failure. All setting will remain in memory because these are store in a non volatile (EEPROM) memory. Use preferably an alkaline battery (no rechargeable battery). When you are disconnecting the system on purpose for a longer period of time, you must disconnect this battery to avoid unnecessary discharge of this battery.

21. TELEPHONE CONNECTION

For connecting the system to the telephone line (meant for analog lines; for ISDN and PABX, refer to 4.1). Always use the supplied cable.

22. CONNECTION MAINS ADAPTOR

Connect the supplied PS500 Mains Adaptor. Use only the supplied PS500.

23. ANTENNA

Used for reception of radio signals of sensors and remote controls. Can be mounted horizontally (tabletop use) or vertically (wall mounted).

INSTALLATION:

Choose a suitable place for the base station, close to a power outlet. (230VAC) and a telephone socket.

For maximising the range, it is recommended to place the base station as much as possible in the middle of the premises you want to protect. By doing this you use the smallest possible distance between sensors and base station and optimise the range of the system.

In doing so you have to keep in mind:

1. Avoid placing the base station close to large metal objects (heater, cooker, etc.)
2. That the place is easy to reach
3. The base station is not placed close to a PC or TV.

TABLE TOP USE

You can position the base station on any flat surface (table, console, etc.) or use the bracket for wall mounting. The rubber feet make sure that the base station remains in its position.

WALL MOUNTING

The supplied wall-mounting bracket allows you to install the SC2800 base station vertically against a wall. Mount the SC2800 at such a height that you can view and operate the panel easily.

For wall mounting, you have to install the radio antenna in the vertical position. Carefully pull the plastic tube away from the antenna wire. Then pull the antenna wire through the vertical-

mounting hole and reposition the plastic tube over the antenna wire.

CONNECTING THE PS500 MAINS ADAPTER

Connect the DIN plug into the socket at the back of the base station. Plug the mains adapter PS500 into a 230 V wall outlet.

PLACING OF THE BACK-UP BATTERY

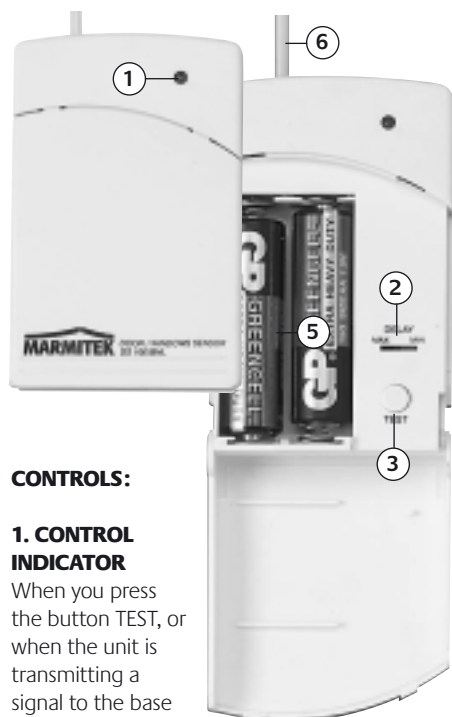
Open the battery compartment at the back of the base station. Connect the 9 V block battery observing the correct polarity. Place the battery in the compartment and close the battery cover.

N.B: The back-up battery has a limited capacity, which will be used as soon as PS500 mains adapter does not supply the base station anymore. Be aware of this when disconnecting the PS500 on purpose.

CONNECTING TELEPHONE CABLE

Connect the supplied telephone cable to the back of the base station. Connect the telephone plug in your telephone wall socket. (refer to 4.1 for more information on ISDN and PABX connection).

4.3 DS10 DOOR/WINDOW SENSORS



CONTROLS:

1. CONTROL INDICATOR

When you press the button TEST, or when the unit is transmitting a signal to the base station, this indicator will come on. When the indicator blinks only weakly, the batteries have to be replaced.

2. MIN/MAX

For setting a delay time of approx. 30 seconds. When switched to the MAX position, the delay time is activated. Position the DELAY switch behind the cover to the MIN position (instantaneous alarm). For an entrance door you set the switch to MAX, allowing you to enter and disarm the system. When you want e.g. a garden door to respond immediately, you switch the DS10 to the MIN position.

3. TEST

Used for activating and installing the sensor during the installation procedure. Can also be used to test the sensor.

4. MAGNETIC CONTACTS (NOT SHOWN)

The magnetic contacts are of the NC (Normally Closed) type. The distance between magnet and contact can not be more than 5mm. When mounted, you have to make sure that the arrows on magnet and contact line up. The length of wire between contact and sensor can be expanded or shortened. Make sure that the wires are well connected and the screws tightened. Multiple magnet switches can be placed in series.

5. BATTERY COMPARTMENT

Place 2 pieces AA batteries observing the polarity instructions in the battery compartment. Use preferably alkaline batteries.

INSTALLATION (install mode):

The Door/Window Sensor consists of a transmitter and a magnetic contact. The magnetic contact consists of 2 parts: the wired NC contact and a separate magnet. Normally the magnet will make the contact to close. When opening of a door or window, the contact be opened and a message will be sent to the base station (the red indicator will come on).

The DS10 is primarily meant for doors and windows, whereby the transmitter part and contact will be placed on the frame and the magnet on the moving part (door or window).

Look on door or window frame where the sensor can be positioned without running the risk of obstructing or damaging the sensor when opening this door or window. Position the sensor, if possible, as high up as possible. This will result in the best possible range. Then mark the position of the sensor and magnet contact. Do not place the magnet contact directly on a metal surface. In case of a metal or metal enforced plastic window-frame, it is recommended to use a 5mm wooden or plastic isolator between magnet contact and frame.

For metal frames, the distance between contact and magnet can not be more than 3mm when door or window is in closed position. For wooden frames this distance is 8mm, but in all cases the opening should be kept to the minimum. To mount the transmitter part, you remove the batteries and screw the back of the transmitter onto a suitable background.

For lift-up or sash windows, the contact and magnet should NOT slide along each other, but should be positioned in such a way that they clearly move away from each other.

Remove the protective cover of the double-sided tape on the magnet and position this on the opening part of window or door. Remove the protective cover of the double-sided tape on the contact and position this on the frame.

N.B.: Make sure that the arrows on the contact and magnet line up.

After testing the system, it is recommended to also screw down the magnet on the surface.

6. MOUNTING THE ANTENNA OF EXTRA DOOR/WINDOW SENSORS

Extra door/window sensors are supplied with a wire antenna and a separate antenna tube. For proper operation, slide the plastic tube over the antenna wire and push it firmly into the sensor housing.

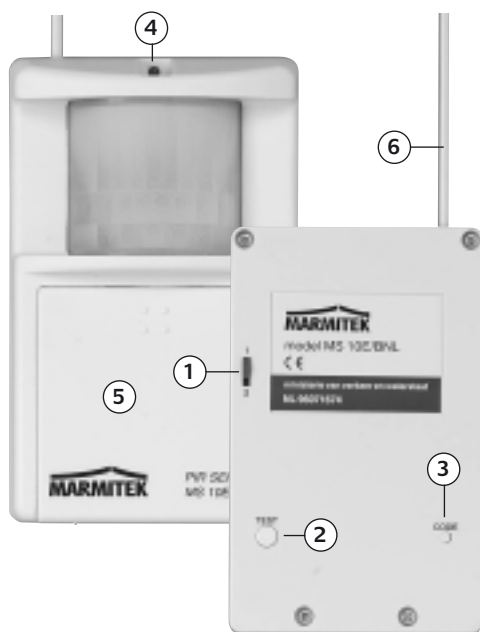
ACTIVATING THE DS10

Push the TEST key of the DS10 for more than 1 second; the indicator blinks twice. Then press the TEST key once more and close the battery cover.

N.B.: When replacing the batteries of the sensor when the system is operational, you can make sure that the sensor maintains its unique code avoiding re-installation. To do this, you OPEN the door or window that is protected by this sensor. After replacing the batteries, you can close the

door or window and the sensor will instantaneously become part of the system again. In case this does not work (e.g. the batteries have been low for too long), you have to re-install this sensor. You first have to erase this specific zone (refer to 5.9) and re-install the sensor (refer to 5.1).

4.4 MS10 MOTION SENSORS



CONTROLS

1. SENSITIVITY SWITCH

This switch allows you to set the sensitivity of the motion sensor. This switch is particularly useful when false alarms are easily created by heat sources like radiators, etc. In position 1 the sensor has the maximum sensitivity while in position 2 the sensitivity is reduced.

2. TEST

Used for activating and installing the sensor during set-up of the system and can also be used for testing the sensor.

3. CODE

By pressing this key, the sensor gets a new code (1 out of 65.536).

N.B.: When the sensor has been installed on the system already, you have, after pressing the CODE key, to erase the zone of this sensor on the base station and re-install the sensor with its new code. (refer to 5.9 and 5.1).

4. CONTROL INDICATOR

When you press the button TEST, or when the unit is transmitting a signal to the base station, this indicator will come on. When the indicator blinks only weakly, the batteries have to be replaced.

5. BATTERY COMPARTMENT

INSTALLATION (install mode):

The motion sensor is activated by changes in temperature. For that reason do not position the sensor close to or above heaters or air conditioners. The motion sensor has a range of 12m and an opening angle of 90°. Due to the special lens, the motion sensor it “looks down” into the area it has to protect. Place the motion sensor always approx. 180cm above the floor and in such a way that the sensor covers the area it has to protect well. The supplied mounting bracket can be mounted both in a 90° corner and on a flat surface. A motion sensor works best when an intruder is crossing the footprint of a sensor rather than walking towards it.

Pressing the key for more than 3 seconds switches the movement detector into “Walk Test mode”, in which the detector merely lights up the diode when it detects a movement and does not transmit a radio signal. In this mode it is possible

to test the detection range of the sensor. When the key is pressed again the detector returns to its normal state.

The motion sensors operate according to the Pulse Counting method. Depending on temperature and settings, a possible motion will only be reported to the base station after 30 seconds.

It may seem that the motion sensor is not functioning properly, however, every motion detected at any time always creates an alarm. The advantage of this method is that the number of false alarms is reduced dramatically.

6. MOUNTING THE ANTENNA OF EXTRA MOTION SENSORS

Extra motion sensors are supplied with a wire antenna and a separate antenna tube. For proper operation, slide the plastic tube over the antenna wire and push it firmly into the sensor housing.

PLACEMENT OF BATTERIES

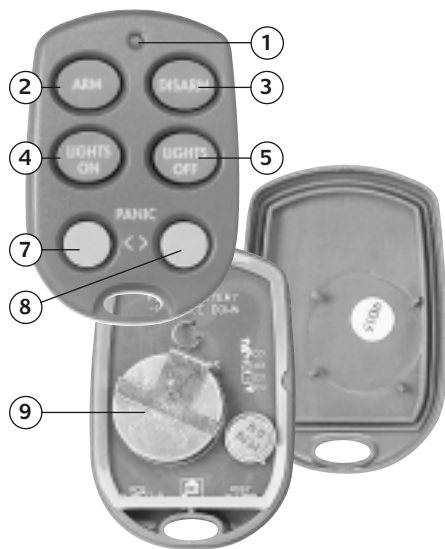
Open the battery cover at the front of the motion sensor. Place 4 AA batteries observing the polarity instructions inside the battery compartment. Close the battery cover.

ACTIVATING THE MS10

Push the TEST key on the back of the MS10 until the indicator comes on

N.B.: When replacing the batteries of the MS10, the unique code is maintained in the sensor. In case the base station does not recognise the MS10 after changing the batteries, you have to re-install this sensor. You first have to erase this specific zone (refer to 5.9) and re-install the sensor (refer to 5.1).

4.5 KR21 KEY CHAIN REMOTE CONTROLS



CONTROLS:

1. CONTROL INDICATORS

Comes on when the remote control sends a radio signal when keys are pressed. When the indicator blinks only weakly, the batteries have to be replaced.

2. ARM

Switches on the security system in the Arm Away mode. All sensors are now activated.

3. DISARM

Switches off the security system.

4. LIGHTS ON

Switches on the lights connected to the lamp module set to the Home Automation base address (refer to 6.8).

5. LIGHTS OFF

Switches off the lights connected to the lamp

module set to the Home Automation base address (refer to 6.8).

7 + 8 PANIC

When both red keys are pressed simultaneously, an immediate alarm will be initiated by the security system.

9. BATTERY HOLDER

The battery holder is located inside the remote. The back of the remote can be easily opened using your fingernails or a small screwdriver. Only use 3V lithium batteries model CR2016 (2x).

ACTIVATION:

BATTERIES

The KR21 is supplied with batteries installed.

INSTALLATION (install mode)

Push the ARM key for more than 3 seconds and release the button; the indicator blinks.

4.6 SYSTEM REMOTE CONTROL SH624 (OPTIONAL FOR PROTECTOR28/4)

CONTROLS:

1. PANIC

When this key is pressed, an immediate alarm will be initiated by the security system.

2. CONTOL INDICATOR

Comes on when the remote control sends a radio signal when keys are pressed. When the indicator blinks only weakly, the batteries have to be replaced.

3. CONTROL KEYS

To controlling the security system and as well as the Marmitek X-10 Home Automation modules.

4. DIMMING KEY

To control the light level of lamps which are connected to lamp modules. Through the control keys, the lamp module will be activated at first by pressing the ON key for this module. You then can control the light level of the lamps by pressing the DIM or BRIGHT key.

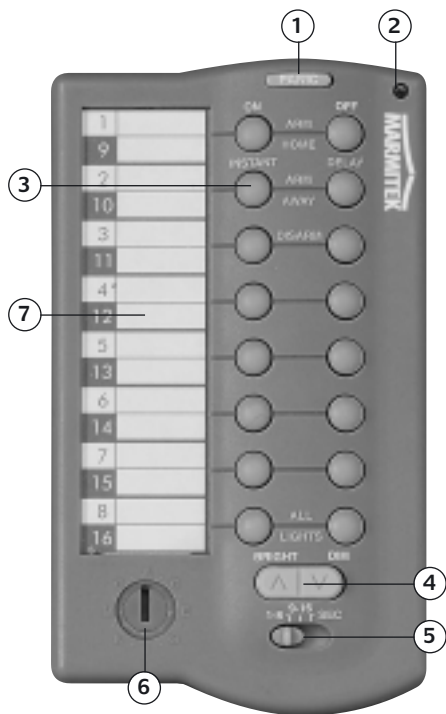
5. MODE SWITCH

The position of this switch defines the functions of the control keys.

SWITCH IN SEC POSITION:

ARM HOME: the security system is switched into the partial alarm mode meaning that all door/window sensors are activated but not the motion sensors.

ARM AWAY: all sensors of the security system are activated.



DISARM: Switches off the security system.

ALL LAMPS ON: for switching on all lamp modules with one press of a button.

ALL LAMPS OFF: for switching off all (lamp and appliance) modules with one press of a button.

MODE SWITCH IN POSITION 1:

1...8: For controlling Marmitek X-10 Home Automation modules with corresponding address (unit code 1 t/m 8).

MODE SWITCH IN POSITION 2:

9...16: For controlling Marmitek X-10 Home Automation modules with corresponding address (unit code 9 t/m 16).

6. HOUSE CODE SWITCH

Used for setting the system address. For proper communication, all code switches of the system components have to set to the same House Code.

7. TEXT WINDOW

On the piece of paper behind the plastic cover of the text window, you can note which Home Automation modules can be controlled with each

key. (e.g. living room lamp, TV, garden lights, etc.).

8. BATTERY COMPARTMENT (BACK COVER)

INSTALLATION:

1. PLACING THE BATTERIES

IMPORTANT: When placing the batteries, make sure the switch is not in position 2!

Open the battery compartment on the back of the remote control and place the batteries (4 x AAA, preferably use alkaline batteries). Make sure you observe the instructions in the battery compartment. Replace the battery cover.

2. ACTIVATION OF THE SH624 (install mode)

Press the PANIC key until the control indicator comes on. Set the mode switch to the SEC position. Make also sure that the House Code is on the same letter code as the base station (behind the cover).

4.7 LM12 LAMP MODULE (OPTIONAL FOR PROTECTOR28/4)

Lights with a power rating between 40W minimum and 300W can be connected to the lamp module. Do not connect any other load -like household equipment or CFL lights- to the module to avoid damage to your equipment and lamp module. Special modules exist for other loads. The lights connected to the lamp module can be activated by the remote controls. Also, when an alarm situation occurs, the lights will flash. During the delay time when arming the system, these lights will also be on. For more information about what is possible, please refer to 6.8.

1. HOUSE CODE SWITCH

Used for selecting the system address. All House Code Switches of the system components need to be set to the same code.

2. UNIT CODE SWITCH

Used for setting the module number. When you set the Unit Code on a module to number 3, you can switch the module on and off with key 3 on the SH624 system remote.

3. PLUG SOCKET

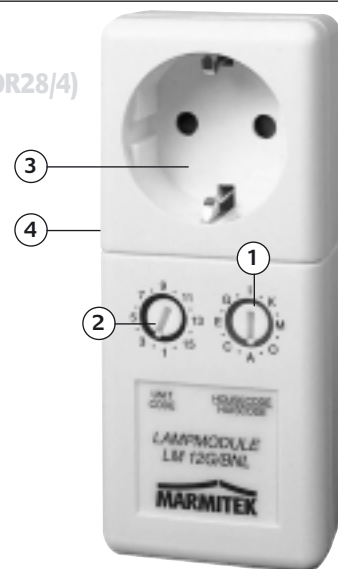
For connecting lamps which you want to control with the module.

4. FUSE

The fuse protects the lamp module against overload. In case of a defective fuse, only replace this with one of the same electrical ratings.

INSTALLATION LM12

Plug the lamp module in a spare wall socket and plug the lights you want to control (40-300W) into the socket of the lamp module.



*Plug type may vary

At the front of the modules, you'll find 2 code switches: Unit Code (1 through 16) and House Code (A through O). Take care that when you are using the modules in combination with the security system, the House Code of the base station and lamp module are the same. You now can control lamp modules individually with the SH624 remote control keys corresponding to the unit code: 1 through 8 or 9 through 16.

Beside the security function, the base station is also a Home Automation controller using the so-

called Marmitek X-10 protocol. In combination with Marmitek X-10 modules, you can remotely control lights and appliances.

Also in case of an alarm, this technology is being used to control lights and external sirens. As such, lights connected to the lamp module will be switched on and off (flash) during an alarm situation for a time period of 4 minutes. After these 4 minutes, they will remain on at full brightness (refer to 6.8). You can expand the system with multiple lamp modules.

For more information about the many options of the Marmitek X-10 system, contact the web site (www.marmitek.com) or your dealer.

4.8 PLACING OTHER (WIRED) SENSORS

The Marmitek Security System allows you to also connect wired (non wireless) sensors to the SC2800 base station. This allows the use of the Marmitek Security System in a number of special applications under special circumstances. You now can e.g. still protect a door or window out of the radio range of base station by using a wired magnetic contact. You can now also use third party -non Marmitek- sensors in combination with the system. Examples of such sensors are: smoke

detectors with relay output, level or temperature sensors (freezer, etc.), flood detectors or motion sensors for special applications.

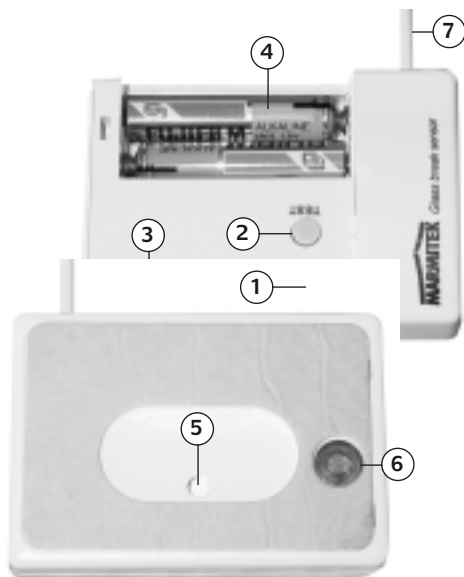
To connect these sensors, use the special input jack on the back of the base station. You can connect any so-called NC (normally closed) contact by means of the special cable supplied with the system. You can connect multiple wired sensors to this input. These sensors, when

connected, are automatically programmed on zone16. In case the contact opens, the security system will respond in the way it is programmed, in the same way as for the other sensors (so including telephone dialler, etc.). For erasing a programmed zone, refer to 5.9.

4.9 PLACING A GLASS BREAK SENSOR (OPTION)

The sensor has to be placed on the window glass. The glass break sensor reacts to the frequency of breaking glass. Position the glass break sensor on windows of which you suspect to be used during a break in into the premises. Place the sensor in such a way that the antenna is positioned in vertical direction. Do not place the glass break sensor on windowpanes which are constantly vibrating (e.g. caused by a window fan). Further,

the GB10 has a light sensor. At dusk, a signal is transmitted to the base station to start the Lifestyle program.



Controls

1 Battery Indicator

When pressing the TEST key or when a signal is transmitted, the indicator light will blink. If it only lights up weakly, the battery needs to be replaced.

2 TEST key

Used for setting the GB 10's system and transmission codes. Also used when the system is being set up for the first time.

3 Sensitivity switch

Sets the alarm threshold for response to breaking glass. Position "1" is high sensitivity, "2" is low.

4 Battery compartment

Insert 2 x 1,5 V batteries (AAA).

5 Microphone

This picks up and recognizes the typical frequency of breaking glass, and activates the alarm.

6 Dusk Sensor

Activates the Life style program in the SC 2200/2700 control unit when the pre-set threshold level of darkness is reached.

7 Antenna

A small plastic tube is supplied with the sensor. Place it over the wire aerial and press it into the holder on the top side of the GB 10.

Installation and start-up

1 Inserting the batteries

Open the battery-compartment at the front. Insert the 2 batteries observing the polarity indicated in the unit. Close the battery-compartment.

Note: The code settings are maintained when replacing batteries. In case the sensor loses contact with the base console, the sensor has to be re-registered with the system.

2 Activating the GB 10

Open the battery-compartment at the front side of the unit.

Press the TEST key for longer than one second. The red indicator light will flash twice.

3 Registering the sensor with your security system

Set the mode switch on the security console to INSTALL

Press the TEST button on the GB10 sensor
Reset the mode switch to RUN1 or RUN2

4 Setting the system address (light control/life style function)

Press and hold the TEST key unit, the indicator light will light continuously.

Press the TEST key the number of times that corresponds to the system address you are setting, e.g. 5 times for address "E", 12 times for address "L".

After 5 seconds the LED will flash the same number of times you pressed earlier.

4.10 DIGIMAX 210 WIRELESS THERMOSTAT (OPTION)



The RF DigiMax 210 thermostat does not need any extra wiring and works within 30 meters range. It is equipped of a secured RF code which the SC2800 base station will learn during the installation process. This code will assure that the Maxi Controller will only answer to messages sent by your DigiMax 210.

You can connect up to 4 DigiMax 210 to the Maxi Controller. Depending on the information sent by the thermostats, the SC2800 base station will send X10 messages on the power line to turn On or Off X10 modules connected to your heaters or boiler.

Each thermostat transmits the comfort set point and the ambient temperature. In the SC2800 base station you can enter a temperature setback, between 1 and 9 degrees. When the Maxi Controller is in "Disarm" or "Arm home" mode, it

will turn On or Off the X10 module connected to the boiler depending of the ambient temperature and the comfort set point.

When the console is in "Arm Away" mode, the setback differential to the comfort set point is applied. Suppose the ambient temperature is 15 °C, the comfort set point is 20°C, with a setback of 4°C : the comfort set point minus the setback is $20^{\circ}\text{C} - 4^{\circ}\text{C} = 16^{\circ}\text{C}$, so the console will send an On message. Suppose that now the ambient temperature is 19°C, the comfort set point minus the setback is $20^{\circ}\text{C} - 4^{\circ}\text{C} = 16^{\circ}\text{C}$, so the console will send an OFF message.

The thermostat functions are described in the manual of the DigiMax 210 thermostat.

The DigiMax 210 is available separately (Art. No. 09431). Please visit www.marmitek.com for more information.

5. PROGRAMMING THE SC2800 BASE STATION

5.1 REGISTRATION OF RADIO SENSORS

Every sensor must be installed or registered with the base station. In this way, the base station recognises only its own sensors. Up to 16 sensors can be registered on the SC2800. One of those 16 can be a wired sensor connected to the input jack at the back of the base station. Each sensor registered by the base station occupies one zone. You can choose to register the sensors automatically on the next available unoccupied zone, but you can also allocate a sensor to a specific zone. (refer to B).



A. REGISTER SENSORS ON THE NEXT AVAILABLE FREE ZONE (STANDARD)

Every time you press a key you hear a short confirmation beep.

Set mode switch to INSTALL: All indicators of earlier registered zones come on

Press the TEST button of sensor 1: Indicator of next available free zone comes on

Press the TEST button of sensor 2: Indicator of next available free zone comes on

REPEAT THIS PROCESS UP TO A MAXIMUM OF 16 SENSORS. THE ZONES ARE GOING TO BE OCCUPIED ONE BY ONE.

Reset the mode switch to RUN 1 or RUN 2: Zone indicators go out.

B. REGISTER SENSORS ON A PRE-DEFINED FREE ZONE (SPECIAL)

Every time you press a key you hear a short confirmation beep.

1. Set mode switch to INSTALL: All indicators of occupied zones come on
2. Key in the required zone (e.g. 14: key 1 + 4)
3. Press the ENTER key on the base station:
4. Press the TEST button of the sensor. The selected zone will now be occupied: Indicator of selected zone comes on
5. Reset the mode switch to RUN 1 or RUN 2: Zone indicators go out.

N.B.: In case that some zone-indicators are on already before you started the registration of sensors, it may be that some sensors have registered themselves onto the base station. This may be the case because e.g. the MS10 Motion Detector has detected a motion or a door or window has been opened. You can erase these zones by using the method described in 5.9 (de-registering a zone) or 5.10 (erasing all of all settings).



5.2 REGISTRATION OF WIRELESS REMOTE CONTROLS



Up to 8 remote controls can be registered with the base station (KR21 and SH624).

Every time you press a key you hear a short confirmation beep.

1. Set mode switch to the INSTALL position: All indicators of occupied zones come on
2. Press an alarm key (e.g. DISARM) of the first remote control (e.g. KR21): No extra zones are occupied.
3. Press an alarm key (e.g. DISARM) of the second remote control (e.g. SH624): No extra zones are occupied.

4. Repeat these steps up to 8 remote controls.

5. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out



5.3 SETTING THE SIREN ON/OFF (LOUD/SILENT ALARM)

You can use your security system without the siren (only telephone dialler and lights). In case of a break in, the siren built into the base station will not be activated. (N.B.: Extra external sirens will always be activated). The factory defaults have the siren switched on.

Every time you press a key you hear a short confirmation beep.

1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
2. Key in your 4 digit PIN code (factory default [0000] refer to 5.8).
3. Press key number 4.
4. Press ENTER.
5. Press 0 for silent alarm: double confirmation beep
or
Press 1 for alarm with siren: double confirmation beep
6. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out



5.4 PROGRAMMING TELEPHONE NUMBER

The Marmitek SC2800 base station has a standard telephone dialler. In case of a alarm, up to 4 telephone numbers of up to 16 digits can be dialled. The phone numbers which are dialled get to listen to your pre-recorded message (5.5). Whoever picks up the phone needs to confirm the call by pressing a 0 on the telephone. The telephone dialler of the base station now knows that somebody is alerted and will stop dialling.

You have to program 4 telephone numbers (your GSM, neighbours, family, friends, etc.) In case you have less than 4 phone numbers, you have to program some numbers more than once to fill all memory positions.

You are not allowed to use emergency numbers of e.g. police, unless you are authorised to do so.

Every time you press a key you hear a short confirmation beep.



1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
2. Key in your 4 digit PIN code (factory default [0000] refer to 5.8)
3. Press ENTER
4. Enter the telephone number (16digits max.). For a dialling pause of one second, press the ZONE 9-16 button (e.g. for use on a PABX)
5. Press ENTER
6. Press the required memory position. Press a 1 for the first telephone number. Short double confirmation beep

Repeat steps 2 through 6 for the 2nd, 3rd and 4th telephone number (step 6: choose 2 for 2nd memory position, etc.).

N.B: You can re-program any of the memory positions (1,2,3, and 4) at any time. The old number will be automatically erased.

7. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out.

5.5 RECORDING THE ALARM MESSAGE

The alarm message of the telephone dialler can be recorded and re-recorded when required. The message can be up to approx. 12 seconds. It is recommended not to make the message any shorter as otherwise long silent gaps will cause confusion (the message is playing continuously) with the person picking up the phone.

The message will be recorded via the microphone of the base station.

Every time you press a key you hear a short confirmation beep.

The distance between you and the microphone may not be more than 30 centimeters while recording the alarm message.



1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
2. Key in your 4 digit PIN code (factory default [0000] refer to 5.8)
3. Press RECORD: RECORD indicator will come on and remain on for 12 seconds.
4. Record your message (12 seconds max.)
5. RECORD indicator goes out (after 12 seconds)

6. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out

Press now RECORD to listen to the alarm message you just recorded. You have to use the earphone supplied with the system (the quality will not be as good as on the phone).

Example of an alarm message: This is the security system of [.....]. Press the zero key on your telephone if this message is over so you can listen to noises in my house. Please initiate the actions we agreed upon.

5.6 DELAY TIMES

ARMING

When arming the security system by means of the remote controls KR21 or SH624 in the ARM AWAY mode, the system will arm with a instantaneously (factory default). In case you want to arm the system delayed, you can program the base station for a delay. (N.B.: Arming the system by means of the ARM AWAY button on the base station, always will result in a delayed arming of the system).

ALARM SENSORS

When the security system is armed, sensors can activate the system either instantaneously or with a delay. This depends on the settings of the SC2800 base station and the switch setting of the sensors. Refer to the list below for a complete overview.

Every time you press a key you hear a short confirmation beep.



1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
2. Key in your 4 digit PIN code (factory default [0000] refer to 5.8)
3. Press key number 5
4. Press ENTER
5. Press 0 for instantaneous alarm
or
Press 1 for delayed alarm
6. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out

OVERVIEW DELAY TIME:

SC2800 base station operation “instantaneous alarm”

Arming of the system with remote controls:
Arming of the system with ARM AWAY button of base station:
Arming of the system with ARM HOME button of base station:
Alarm activation by a DS10 door/window contacts:

Alarm activated by an MS10 motion sensors:

Instantaneous
Delay of one minute
Instantaneous
Instantaneous when switch is in MIN position,
30 seconds when in MAX position
Instantaneous

SC2800 base station operation “delayed alarm”

Arming of the system with remote controls:
Arming of the system with ARM AWAY button of base station:
Arming of the system with ARM HOME button of base station:
Alarm activation by a DS10 door/window contacts:

Alarm activated by an MS10 motion sensors:

Delay of one minute
Delay of one minute
Delay of one minute
Instantaneous when switch is in MIN position,
30 seconds when in MAX position
Delay of 30 seconds

5.7 JAMMING DETECTOR ON/OFF

The Marmitek SC2800 base station is equipped with a system to detect strong external interfering signal that may affect the proper operation of the security system. Signals of e.g. wireless headsets may influence the range of sensors drastically. In case you want your system to detect these signals, you have to switch on the anti jamming function. When your security system is armed and an interfering signal is detected for a period of over 20 seconds, the base station will:

The JAMMING indicator on the base station will come on as long as the interfering signal is detected.
A fixed (4 language) warning message will be transmitted to the 4 telephone numbers programmed into the base station.

Even if the interfering signal disappeared, the JAMMING indicator will remain flashing until the system is disarmed via the keyboard of the base station. (4 digit PIN code + DISARM).

SET JAMMING DETECTOR ON/OFF

Every time you press a key you hear a short confirmation beep.

1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
2. Key in your 4 digit PIN code (factory default [0000] refer to 5.8)
3. Press key number 6
4. Press ENTER
5. Press 1 for jamming detector on
or
Press 0 for jamming detector off
6. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out



5.8 CHANGING YOUR PERSONAL IDENTIFICATION CODE

This access code, is your Personal identification code. When you have changed this code, you are the only person having access to the settings of the SC2800 base station. You can also use this code to arm and disarm the system via the keyboard of the base station. In case you loose your PIN, you have to contact your Marmitek Authorised Service Centre (MASC) to reset the access code to the factory default [0000].

Entering you PIN code.

Every time you press a key you hear a short confirmation beep.



1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
2. Key in your 4 digit PIN code (factory default [0000])
3. Press key number 7
4. Press ENTER



5. Enter your new access code (PIN)
6. Press ENTER
7. Enter your new access code again: One double confirmation beep
8. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out

5.9 ERASING OF A REGISTERED SENSOR

If necessary a sensor can be erased from the memory of the base station (e.g. code changed when batteries were changed). When you want to re-register a specific sensor with the same zone, you have to follow the instructions under 5.1 (register sensors on a pre-defined free zone).

To erase a registered sensor:

Every time you press a key you hear a short confirmation beep.



1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
2. Key in your 4 digit PIN code (factory default [0000] refer to 5.8)
3. Press key number 8
4. Press ENTER



5. Enter the required zone (1...16, e.g. press 2 for zone 2, press 1 + 5 for zone 15):
6. Press ENTER
7. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out

5.10 ERASING OF ALL SENSORS

In case it is required, you can reset the base station to the factory default settings. However, your PIN and option settings remain the same. Every time you press a key you hear a short confirmation beep.



1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
2. Key in your 4 digit PIN code (factory default [0000] refer to 5.8)
3. Press key number 0
4. Press ENTER



5. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out

6. OPERATING THE SYSTEM

6.1 INSTALL, RUN 1 AND RUN 2



INSTALL – Position for installing sensors and for changing system settings.

RUN 1 – For normal alarm operation.

RUN 2 – For normal alarm operation. When in disarmed mode, the base station will give a pleasant sounding tone when a door or window is opened (access control).

6.2 ARMING THE SYSTEM

ARM AWAY: Full activation of the alarm system. All sensors are activated.

ARM HOME: Partially activated alarm. Alarm function when being at home. Only door and window sensors (no motion sensors) are activated. You can walk around while the outer “shell” of the house is still protected.

A. The ARM AWAY function can be activated in the following three ways:

Press the ARM AWAY button on the SC2800 base station: Single tone confirmation beeps during arming delay (1 minute)

When the system is armed after one minute: ARM indicator comes on

Press the ARM AWAY button on the SH624 system remote control: Depending on the settings of the SC2800 (5.6) the system will arm instantaneously or delayed. When delayed, the confirmation beep will sound (1 minute)

When the system is armed after one minute: ARM indicator comes on

Press the ARM button on the KR21 key chain remote control: Depending on the settings of the SC2800 (5.6) the system will arm instantaneously or delayed. When delayed, the confirmation beep will sound (1 minute)

When the system is armed after one minute: ARM indicator comes on

B. The ARM HOME function can be activated in the follow two ways:

Press the ARM HOME button on the SC2800 base station: Depending on the settings of the SC2800 (5.6) the system will arm instantaneously or delayed. When delayed, the confirmation beep will sound (1 minute)





When the system is armed after one minute: ARM indicator comes on

Press the ARM HOME button on the SH624 system remote control: Depending on the settings of the SC2800 (5.6) the system will arm instantaneously or delayed. When delayed, the confirmation beep will sound (1 minute)



When the system is armed after one minute: ARM indicator comes on

N.B.: When arming the system, all sensors will be checked for proper operation. When a failure is detected, you'll hear a dual tone error message. When a sensor reports that there is a problem (e.g. window open), you can choose to not activate or bypass that sensor. To do so, you have to press the BYPASS button during the time that you hear the dual tone and then arm the system again. The zone indicator now flashes rapidly. As soon as you close the window, the bypass is removed automatically and the sensor becomes part of the system again.

6.3 WHEN AN ALARM SITUATION OCCURS

- **An alarm situation can only be detected when the SC2800 base station is armed**
- **An instantaneous or delayed alarm is initiated depending on the settings of the SC2800**
- **An silent or loud alarm is initiated depending on the settings of the SC2800**

Alarm process:

The ARM indicator flashes and the zone indicator tells which zone has caused the alarm

Telephone dialler

As soon as the last digit of the first telephone number has been dialled, the alarm message starts playing and is repeated a number of times.

When the call is answered and confirmed by pressing the 0 on the telephone, the base station stops dialling. The person confirming the call can now listen to noises in the protected premises for 1 minute. During this time the siren is switched off.

The base station remains in the armed mode. Any new alarm detection will be handled as described.

In case the call to the first telephone number is not confirmed, the second, third and fourth phone number will be dialled. This cycle will be repeated 3 times until somebody confirms the call by pressing a 0.

Home Automation modules

When an alarm is detected, all lights connected to the lamp module (LM12, LW10 and LD10) will switch on and off (flash) during the alarm time of 4 minutes. Then the lights remain on until the system is disarmed.

Appliance modules (AM12, AW10, AD10) will be switched off. For more information refer to 6.8.

6.4 DISARMING THE SYSTEM

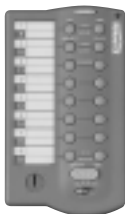


The security system can be disarmed by means of the KR21 and SH624 remote control or by using your PIN on the keyboard of the SC2800 base station.

1. Disarming via the keyboard of the SC2800 base station:

Key in your 4 digit PIN code (factory default [0000] refer to 5.8): One confirmation beep at every key press

Press the DISARM button: Dual tone confirmation. ARM indicator goes out or flashes when an alarm was detected previously.



2. Disarming the system using the KR21 key chain remote control:

Press the DISARM button: Dual tone confirmation. ARM indicator goes out or flashes when an alarm was detected previously.

3. Disarming the system using the SH624 system remote control:

Press the DISARM button: Dual tone confirmation. ARM indicator goes out or flashes when an alarm was detected previously.

6.5 DISARMING AFTER AN ALARM SITUATION

You disarm the system in the same way as described under 6.4.

Base station:

The ARM indicator on the base station will be flashing when an alarm situation has occurred. The zone-indicator panel will tell you which zone caused the alarm situation. After an alarm, you can reset the system by keying your PIN and pressing the DISARM button. The flashing ARM and zone indicator will now go out.

Home Automation modules:

When the security system is armed and an alarm situation occurs, the lights connected to the Lamp Module LM12 will be switched on and off continuously (flashing). For more information refer to 6.8. After approx. 4 minutes the siren in the SC2800 base station stops and the lights are going on continuously. When you disarm the system these lights are switched off.

6.6 PANIC ALARM



A panic alarm can be activated at any time in case of an emergency, regardless if the system is armed or disarmed.

You can activate a panic alarm in three ways:

Using the SC2800 base station:

Press the red PANIC button: The panic alarm will be activated without any delay. Depending on the SC2800 setting, the siren will sound or not (refer to 5.3).



Using the SH624 system remote control:

Press the red PANIC button: The panic alarm will be activated without any delay. Depending on the SC2800 setting, the siren will sound or not (refer to 5.3)

Using the KR21 key chain remote control:

Press the 2 red PANIC buttons simultaneously: The panic alarm will be activated without any delay. Depending on the SC2800 settings, the siren will sound or not (refer to 5.3)

6.7 ZONE INDICATORS



The zone indicator panel gives the status of the registered sensors.

INDICATOR FLASHES SLOWLY:

The base station did not receive a message from that sensor for quite a while. Replace the batteries of the sensor. If that does not correct the problem, re-register the sensor (refer to 5.1).

INDICATOR FLASHES RAPIDLY:

The zone is cancelled by pressing the BYPASS button when you last armed the system (6.2).

ZONE INDICATOR IS ON, ARM INDICATOR FLASHES:

This zone initiated the most recent alarm situation.

INDICATOR IS ON IN DISARM MODE:

The door or window protected by the DS10 is open.


6.8 CONTROLLING LIGHTS AND APPLIANCES

Your security system is equipped with a wide variety of functions to control lights, extra sirens, appliances and sunshades, throughout the house. Some sets have a Lamp Module LM12, for controlling lights, as a standard item. More modules are available separately, to expand your system. Beside lamp modules, in-wall dimmer and distribution panel dimmers (DIN-Rail dimmers) are available.

There's a major difference between lamp and appliance modules. The LM12 is a lamp module. Besides switching, this module can also dim lights. Modules that cannot dim are called appliance modules. Electrical loads or all kinds can be connected to such a module (heater, pond pump, coffee machine, washing machine, etc.). When an alarm situation occurs, all lamps connected to lamp modules (LM12 Lamp Module, LW10 In-Wall Dimmer and LD10 DIN-Rail Dimmer) will switch on and off continuously (flashing). Appliance modules will be switched off. You can get more information about expanding your system from your dealer or at our website: www.marmitek.com.

6.8.1. AVAILABLE HOME AUTOMATION FUNCTIONS

(REFERENCE ADDRESS SC2800 = A1 (FACTORY DEFAULT), REFER TO 6.8.2 FOR MORE INFORMATION)



1. ALARM LIGHT


This Home Automation module will be switched on during the arm delay of the security system. As soon as the system arms, the module is switched off. This module can also be controlled by pressing the Light On – Light Off keys of the KR21 Key Fob Remote. Now there is no need to arrive home in the dark anymore, or leave on lights in the house when you are going away.

MARMITEK X-10
MODULE SET TO A1

O·A·C
M·I·E
K·I·G

15·1·3
13·5
11·9·7

HOUSEUNIT



2. ALL LIGHTS ON/OFF


During an alarm, all lamp modules having the same House Code as the base station (in our example with base address A1, all lamp modules with House Code A) will be switched on and off (flashing) during the alarm time of 4 minutes. All appliance modules with House Code A will be switched off.

MARMITEK X-10
MODULE SET TO A

O·A·C
M·I·E
K·I·G

15·1·3
13·5
11·9·7

HOUSEUNIT



3. STATUS INDICATION

This Home Automation module will be switched on as soon as you arm the system. The module will be switched of as soon as the system is disarmed. Gives you the status of your security system being in armed or disarmed mode.

MARMITEK X-10
MODULE SET TO A2

O·A·C
M·I·E
K·I·G

15·1·3
13·5
11·9·7

HOUSEUNIT

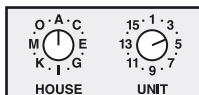
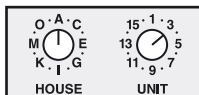


4. LIFESTYLE FUNCTION

Modules will be switched on and off to simulate your presence (refer to 6.9).

MARMITEK X-10
MODULE SET TO A3

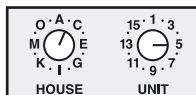
A4



5. EXTERNAL SIREN - UNIVERSAL

This function will activate an AD10 (Art.No. 08933, separately available) during an alarm and will be automatically switched off after 4 minutes. You now can place multiple sirens without installing extra cables.

MARMITEK X-10
MODULE SET TO B5

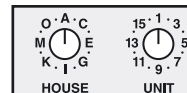


6. EXTERNAL INDOOR SIREN PH7208

The Marmitek Siren works without extra wiring. The commands to switch the siren on and off are sent through the existing house wiring (Marmitek X-10 command "all lights on" and "all lights off"). These commands are being placed on the existing house wiring by the SC2800 base station. Note: the Siren has to be connected on the same phase as the alarm console. If this is not possible you need to use Phase Coupler/Filter (FD10). To prevent false alarm the systems waits 20 seconds before triggering the Siren after activating the Alarm. The Siren makes a piercing two-tone signal for 4 minutes when activated. After this the Siren will be automatically switched off (or sooner when the alarm is switched off). Note: When you use a Marmitek Alarm System, the Sirens always work during an alarm, regardless of the function silent alarm is being switched on.

The PH7208 is designed for indoor use. You can connect the PH7208 to a standard wall outlet.

PH7208 SET TO A1



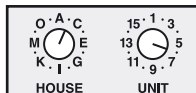
7. OFF WHEN AWAY

Module will be switched off as soon as the system is disarmed. Will often

be used in combination with scenes/macro's (wake up, leave, come home, sleep, etc.) of the Marmitek X-10 CM11 Computer Interface.

For more information ask your dealer or look at our website: www.marmitek.com

MARMITEK X-10
MODULE SET TO B6



6.8.2. REFERENCE ADDRESS FOR HOME AUTOMATION

To control various Home Automation modules, the reference address has to be set on the SC2800 base station. The address A1 is the factory default. The A in this address is the House Code (HC). Under normal circumstances, the House Code of the base station, remote controls and Home Automation modules must be on the same letter code. The 1 in the reference address is called Unit Code (UC).

The SC2800 base station normally transmits signals to various addresses to activate e.g. extra sirens. The functions are preprogrammed into the base station. An addressing method "with respect to the reference address of the base station" is used to achieve these functions. When multiple Marmitek X-10 Home Automation systems are placed in the house, it can be necessary to change the Unit Code of the base station.



CHANGING THE UNIT CODE OF THE BASE STATION

Every time you press a key you hear a short confirmation beep.

- 1. Set the mode switch to the INSTALL position: All indicators of occupied zones come on
- 2. Key in your 4 digit PIN code (factory default [0000] refer to 5.8)
- 3. Press key number 1

- 4. Press ENTER
- 5. Enter the required Unit Code (1...16, e.g. press 2 for Unit Code 2, press 1 + 5 for Unit zone 15):
- 6. Press ENTER
- 7. Reset the mode switch to the RUN 1 or RUN 2 position: Zone indicators go out.

Function addresses based on reference address:

FUNCTION ADDRESSES			
Function:	Address:	With ref. address A1:	With ref. address B3:
Alarm light	[HC+[UC]	A1	B3
All lights	[UC]	A	B
Status Indicator	[HC] + [UC+1]	A2	B4
Lifestyle	[HC] + [UC+2] [UC+3]	A3 and A4	B5 and B6
External Siren	[HC+1] + [5]	B5	C5
Off when away	[HC+1] + [6]	B6	C6

CONTROL INDIVIDUAL MODULES WITH THE SC2800 BASE STATION

You can also control Marmitek X-10 Home Automation modules from the keyboard of the SC2800 base station. Key in the unit code on the keyboard (for 15: key in 1 and 5). You'll hear a confirmation beep after each key press. Press the UNIT ON button to switch a module on or press UNIT OFF to switch the module off.

CONTROL ALL MODULES WITH THE SC2800 BASE STATION

ALL LIGHTS ON: All lamp modules with the House Code of the base station will come on
ALL LIGHTS OFF: All modules with the House Code of the base station will go out

- HC:** House Code
- UC:** Unit Code
- UC+1:** One Unit Code higher than the Unit Code of the reference address of the base station (e.g. 2 with a base address of A1)
- HC+1:** One House Code higher than the House Code of the reference address of the base station (e.g. B with a base address of A1)

CONTROLLING INDIVIDUAL MODULES WITH SH624 SYSTEM REMOTE CONTROL (REFER TO 5.1).

6.9 LIFESTYLE PROGRAM

For using this function, you need the Glass Break Sensor GB10 (optional). This sensor contains a photocell that (at dusk) starts a program simulating your presence in the house. This function only becomes active when the security system is in the ARM AWAY mode. As soon as it becomes dark, modules with addresses A3 and A4 (when reference address is A1, refer to 6.8) will randomly switch on and off, so it looks like you are at home. To simulate that you are going to sleep, you're switching off the modules by pressing TIME OFF at the base station, Switching off the Lifestyle function is now repeated every 24 hours at exactly the same time as you pressed the TIME OFF button.



7. SC2800 DIAL-IN FEATURES



Your SC2800 base station is equipped with a dial-in function. You now can control your security system from every touch tone phone or mobile. You also can control lights and appliances over the phone. Your phone must be capable of touch tone (DTMF) dialling. Most mobiles have this as a default setting. If not, you can activate DTMF dialling via the menu of your mobile. Your lights and appliances have to be connected to Marmitek X10 Home Automation Modules. For more information, go to www.marmitek.com.

1. SETTING THE PHONE LINE PICK UP TIME

You can set the time it takes for the base station to answer an incoming call. The factory default is 30 seconds. When you are using services like voice mail, an answering machine, etc., you may want to set the line pick up time shorter (15 sec). The dial-in feature can also be disabled.

To set the phone line pick up time:

1. Set mode switch to INSTALL: All indicators of occupied zones come on
2. Enter your 4 digit PIN code (factory default [0000] refer to 5.8): One confirmation beep at every key press
3. Press key number 3: One short confirmation beep
4. Press ENTER: One short confirmation beep
5. You can now choose 1 of 3 options:
 - Press 0 for a pick up time of 30 seconds
 - Press 1 for a pick up time of 15 seconds
 - Press 2 for disabling the dial-in function: Short double confirmation beep
6. Reset mode switch to RUN 1 or RUN 2 position: Zone indicators go out

2. ARMING AND DISARMING VIA THE TELEPHONE

As soon as the base station answers your call, you can arm or disarm the security system.
Arming and disarming the system:

1. Call the base station from a touch tone or mobile phone.
2. The base station will answer your call with 3 short beeps
3. After these beeps, enter your PIN code via the phone (factory default [0000] refer to 5.8).
4. The base station confirms a correct PIN code with 3 short confirmation beeps
(an erratic PIN code is indicated by one long beep).
5. You now can select the ARM AWAY mode by entering 0 followed by a *. You'll hear 3 short confirmation beeps.
6. You can disarm the system by entering 0 followed by a #. You'll hear 2 short confirmation beeps.

3. SWITCHING LIGHTS OVER THE TELEPHONE

As soon as the base station answers your call, you can control lights and appliances with Marmitek X-10 Home Automation modules over the phone.

1. Call the base station from a touch tone or mobile phone.
2. The base station will answer your call with 3 short beeps.
3. After these beeps, enter your PIN code via the phone (factory default [0000] refer to 5.8).
4. The base station confirms a correct PIN code with 3 short confirmation beeps
(an erratic PIN code is indicated by one long beep).
5. Switch ON lights or appliances connected to a module by entering it's Unit Code (e.g. 12) followed by a *.
You'll hear 3 short confirmation beeps.
6. To switch OFF lights or appliances connected to a module, enter it's Unit Code (e.g. 12) followed by a #.
You'll hear 2 short confirmation beeps.

8. SETTING 'SENSOR ERROR' MESSAGE



When an error occurs in one of the motion or door/window sensors (e.g. battery low), you can program the base station to report this via phone. This is the same fixed service message which is used to report a detected jamming (refer to 5.7). It only reports a system error and not an alarm situation. This function is disabled in the factory default settings. This service message follows the same dialling procedure as a real alarm message, i.e. dials the same phone numbers.

1. Set mode switch to INSTALL: All indicators of occupied zones come on
2. Enter your 4 digit PIN code (factory default [0000] refer to 5.8): One confirmation beep at every key press
3. Press key number 2: One short confirmation beep
4. Press ENTER: One short confirmation beep
5. You can choose 1 of 2 options:
 - Press 1 for enabling the sensor error message
 - Press 0 for disabling the sensor error message: Short double confirmation beep
6. Reset mode switch to RUN 1 or RUN 2 position: Zone indicators go out

9. TROUBLE SHOOTING

The security system does not operate:

Check that the POWER indicator on the SC2800 base station is on. If not, check that the PS500 power supply is plugged into a wall socket and if the DIN connector is properly plugged into the back of the base station.

Check that the mode switch on the base station is in the RUN 1 or RUN 2 position.

Check that the system can be controlled via the base station. If so, test the remote controls by checking that the control indicator on the remotes comes on when you press e.g. the ARM button. Replace batteries in case necessary and re-install the remote control.

When a zone indicator flashes slowly:

One of the door/window or motion sensors did not send a signal to the base station for quite some time. Check the batteries in the sensor. If necessary, erase the zone (5.9) and re-install the sensor (5.1).

When an error is detected during arming the system, you'll hear a dual tone "warning" signal. When a sensor reports that there is a problem (e.g. door or window open), you can choose to not activate this sensor. You then have to press the BYPASS button during the time that you hear the dual tone signal. The press ARM again. The zone indicator now is flashing rapidly. Once the window is closed, the bypass will be removed and the sensor will become part of the system again.

When a zone indicator flashes rapidly:

You pressed the BYPASS button to arm the system while a door/window or motion sensor reported a problem. Correct the problem (close door or window, replace batteries, etc.) to re-activate this zone.

You hear a repeating dual tone signal while you try to arm the system and the system does not go into arm mode:

Check the zone indicators on the base station. When a door or window is left open, the zone indicator for that zone will be on. When there's a problem with the sensor, the zone indicator will flash slowly (press the ZONE 9-16 button when you have installed more than 8 sensors and you want to check the status of zones 9 to 16).

You now can do the following:

Key in your 4 digit PIN followed by DISARM. Check all door- and window sensors for proper operation (open and close e.g. a door but not too fast, wait until the control indicator of the sensor goes out). Check if all protected doors and windows are properly closed. When everything is OK, now arm the system again. As long as you hear the dual tone signal, you can press BYPASS to ignore the problem zone (the zone indicator starts flashing rapidly). The arm the system again. The problem zone will now be ignored and is not protected!

You hear a repeating single tone to when arming the system:

This is the normal way of operation for the system. When arming the system, you have 1 minute to leave the premises because of the arm delay. If required, you can switch off this delay (refer to 5.6). After one minute the repeating tone stops and the system is now armed.

When you cannot switch on or off the lights with the LIGHTS ON and LIGHTS OFF button of your remote control:

Make sure that the House Code switch of the lamp modules have been set to the same House Code as the one under the cover of base station (usually A). Make sure that the reference address (for Home Automation functions) of the base station is at the same Unit Code as the

one on the lamp module. Using the factory default reference address A1 of the base stations, the lamp module also has to be set to A1.

Make sure that lights connected to the module are switched on and the lamp(s) function properly. Use another wall outlet. Check that the control indicator on the remote control comes on when you press the button. Replace batteries in case necessary.

When using multiple phases in your house, it may be required to couple these phases for Marmitek X-10 signals. Contact your dealer or for more information.

The alarm is activated while entering the house before you can disarm the system:

Use the MAX position on the DS10 Door/Window Sensor. In that way you create a delay between opening the door and causing an alarm.

When you open a door or window and the alarm is not activated:

Check that the security system is armed.

Check that the mode switch on the base station is in the RUN 1 or RUN 2 position.

Check that pressing the TEST button on a door or window sensor creates an alarm.

Check that the transmitter of a sensor is not on or close to a large metal object. Position the transmitter not on but next to metal frames (e.g. on the wall) and observe metal supported synthetic frames. Do not position the transmitter close to armoured glass. When an alarm is not initiated when pressing the TEST button, check if the indicator on the sensor comes on when pressing the button. When the indicator does not come on, replace the batteries.

N.B.: When replacing the batteries of the sensor when the system is operational, you can make sure that the sensor maintains its unique code avoiding re-registration. To do this, you OPEN the door or window that is protected by this sensor. After replacing the batteries, you can close the door or window and the sensor will instantaneously become part of the system again. In case this does not work (e.g. the batteries have been low for too long), you have to re-install this sensor. You first have to erase this specific zone (refer to 5.9) and re-register the sensor (refer to 5.1).

The alarm is activated when pressing the TEST button but not when a door or window is opened:

Check that the reed contact and magnet are properly installed.

Check that the wires between transmitter and magnet contact are properly connected.

Check that the transmitter of a sensor is not on or close to a large metal object. Position the transmitter not on but next to metal frames (e.g. on the wall) and observe metal supported synthetic frames. Do not position the transmitter close to armoured glass.

Check that the gap between magnet and the reed contact is not too large (10mm on a wooden and 3mm max on a metal surface).

When you do not hear a short beep from the base station when pressing the TEST button during installation of the door/window or motion sensors:

The sensor is registered with the system already. You can test this by arming the system and causing an alarm. Observe that motion sensors have a reset time between detection of motions (30-60 seconds).

The sensor is not registered with the system because it has the same code as another sensor you are using with the system.
For a DS10 Door/Window Sensor, remove the

batteries and press the TEST button. Reposition the batteries and press the TEST button for 3 seconds. Set the mode switch of the base station to INSTALL and register the sensor by pressing the TEST button.

For an MS10 Motion Sensor, press the CODE button at the back of the unit with e.g. a pencil. Set the mode switch of the base station to INSTALL and register the sensor by pressing the TEST button.

When the battery indicator of the base station comes on:

Replace the back-up battery of the base station (9V block battery). A 9 V alkaline battery lasts for approx. 12 hours after a mains power failure. The setting of the base station are stored in a non-volatile (E2PROM) memory, which means that all setting of the base station maintained during power failure and even when the back-up battery is empty.

When the ARM indicator on the base station flashes:

This indicates that there has been an alarm. In case one of the zone indicators flashes also, this indicates which zone was the source for the alarm. To reset the base station, you press DISARM, after entering your PIN. You now can arm the system again.

When a motion sensor generates an alarm:

Motion sensors are activated by change in temperature. Do not position motion sensors close to heat sources, like radiators. Do not install motion sensors in direct sunlight.

When the base station does not dial out:

Check the telephone connection. Only use the supplied cables for connecting the base station. For more information, refer to 4.1 point 3.

Check that all four of the memory positions have been programmed with a phone number.

Extra siren AS509/PH7208 (optional) does not sound during an alarm:

The siren is controlled over the mains power lines but with a delay of 20 to 30 seconds.

When an alarm occurs, the ARM indicator flashes but the internal siren does not sound:

The silent alarm mode is programmed in the settings of the base station. (refer to 5.3).

DECLARATION OF CONFORMITY

Regarding the certification of this product Marmitek Protector28

Following technical documentation analysis and/or EMC test results, and according to article 10.5 of the directive 1999/05/EC, Marmitek declares that the equipment specified below complies with the essential requirements of this Directive.

The PROTECTOR28 complies to standards:

EN 60-950: 1992 / A1+A2: 1993
A3: 1995 / A4+A11: 1997

Emission: EN 50081-1 (EN 55022) 1992

Immunity: EN 50082-1 (Edition 1992)
EN 50065-1 (Edition 1995)
TBR 21 TESTREPORT # 1158/99 1157/99

We the undersigned, hereby declare that the equipment specified conforms the above directives,



Evert Schaeffer
Product Manager
Marmitek BV
Netherlands
18th Februari 2003

CE 0165

(B) (DK) (D) (GR) (E) (F) (IRL) (CH) (I) (L) (NL) (A) (P) (FIN) (S) (GB)

